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Welcome

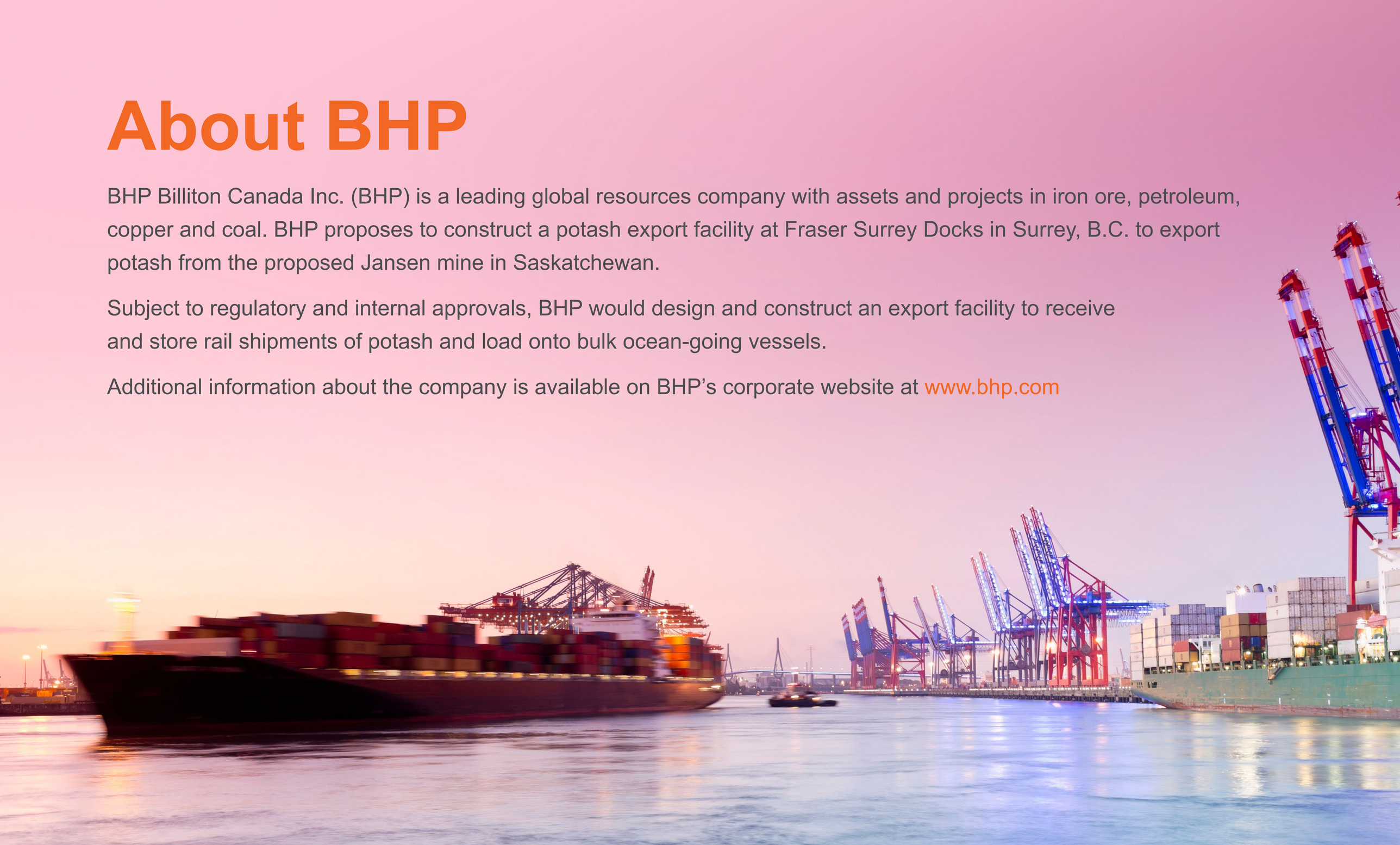
BHP Potash Export Facility at Fraser Surrey Docks

About BHP

BHP Billiton Canada Inc. (BHP) is a leading global resources company with assets and projects in iron ore, petroleum, copper and coal. BHP proposes to construct a potash export facility at Fraser Surrey Docks in Surrey, B.C. to export potash from the proposed Jansen mine in Saskatchewan.

Subject to regulatory and internal approvals, BHP would design and construct an export facility to receive and store rail shipments of potash and load onto bulk ocean-going vessels.

Additional information about the company is available on BHP's corporate website at www.bhp.com



www.bhp.com/fsdpotashexport

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What is Potash?

Potash, technically known as potassium chloride (KCl), is a naturally occurring mineral salt and a key ingredient in agricultural fertilizer, including common household garden fertilizers. Potash is non-flammable, non-combustible and is considered non-toxic to aquatic species. Similar to table salt, potash is mildly corrosive to metals, and is water-soluble so requires a dry location for storage. The world's largest known reserves of potash are located in Saskatchewan, Canada. Potash is processed into solid particles that are up to 4 millimeters in size and range from pink to red in colour.

About 95 per cent of potash consumption is for use in fertilizers, the remaining 5 per cent is used in a variety of chemical and manufactured products. Fertilizers are a major contributor to improving crop yields and resilience and helping to feed the growing global population.

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About the Project

The proposed potash export facility, with a throughput of up to 8 million tonnes per annum (Mtpa), will:

- Receive shipments of product by rail from the proposed Jansen mine
- Offload product from rail cars to the conveyor system
- Store potash in the product storage building
- Transfer product from the product storage building via conveyors to the shiploader and to a waiting vessel for export

When throughput at the facility reaches the projected 8 Mtpa, 8 to 10 trains per week are expected. Three to four vessels will load at the facility per week ranging from Handysize up to Kamsarmax size – similar to vessels that already frequent the existing terminal.

Project Status

We have submitted our permit application to the Vancouver Fraser Port Authority for review. We invite interested parties to ask questions and provide feedback on our application. **The application review public comment period will run from 28 June to 27 July 2018.**

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Noise

Assessment of how the proposed Project will affect noise levels experienced in the adjacent community.

What we studied

- Inventoried noise emissions for the existing, baseline conditions and the future, Project conditions.
- Monitored existing noise conditions at nearby residential receivers.
- Based on monitoring results and equipment operations, used modeling to predict existing and future community noise levels. Noise modeling for the future scenario was conducted for the Project operating at full capacity.
- Reviewed and integrated applicable mitigation options.

Key Findings

- Traffic on Highway 17 is the dominant noise source for most receivers in the baseline scenario.
- With implementation of low noise initiatives, including those for rail squeal and automated unloading which eliminates train “stop and go” noise, the average increase in noise is predicted to be less than one decibel.

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Air Quality

Assessment of air emissions from proposed operations and potential effects, which could affect air quality.

What we studied

- Inventoried air emissions for the existing, baseline conditions and the future, Project conditions.
- Level 1 Emission Estimation.
- Level 2 Atmospheric Dispersion Modelling.
- Mitigation measures for construction and operation.

Key Findings

- For all air contaminants no exceedances of the ambient air quality objectives were predicted outside the immediate area of the Project fenceline.
- Predicted air quality effects, including ambient background levels, at sensitive receptors and residential neighbourhoods are generally low and remain below all ambient air quality objectives.
- Covered storage and conveyors, baghouse dust collectors and a telescopic cascading chute on the travelling ship loader, are used to minimize the impacts to air quality.

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Lighting

Review of proposed exterior lighting design including the location, type, orientation and level of illumination.

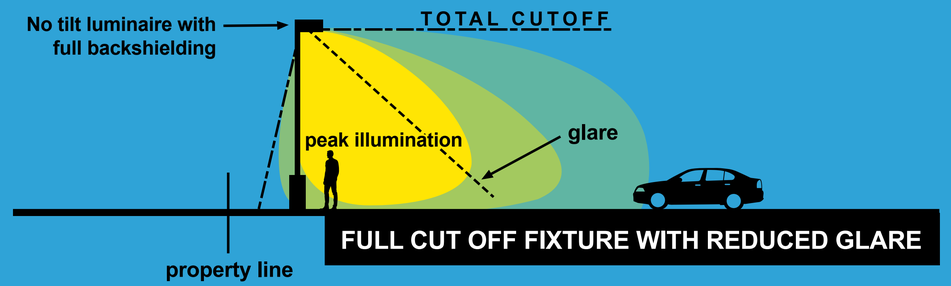
What we studied

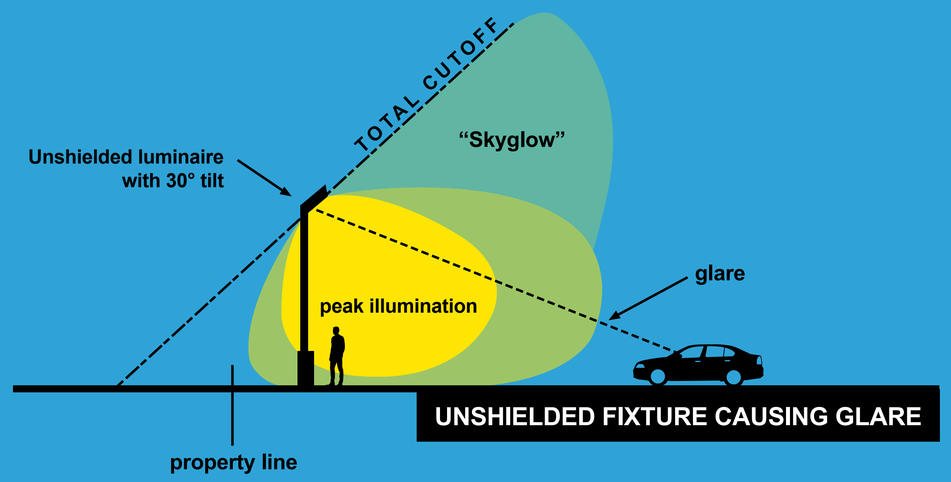
- Existing light level readings.
- Assessed lighting design for consistency with the port authority's lighting guidelines, WorkSafeBC and the Illuminating Engineering Society.

Key Findings

- Lighting design and proposed operation is consistent with port authority guidance and industry practice and uses energy-efficient light-emitting diode sources.
- Project lighting design will minimize the potential for adverse lighting effects to the greatest extent practical while meeting worker safety requirements.

Full cut-off lighting fixtures will be used for the Project to reduce skyglow and glare. Figures below illustrate the difference between cut-off and non cut-off fixtures.





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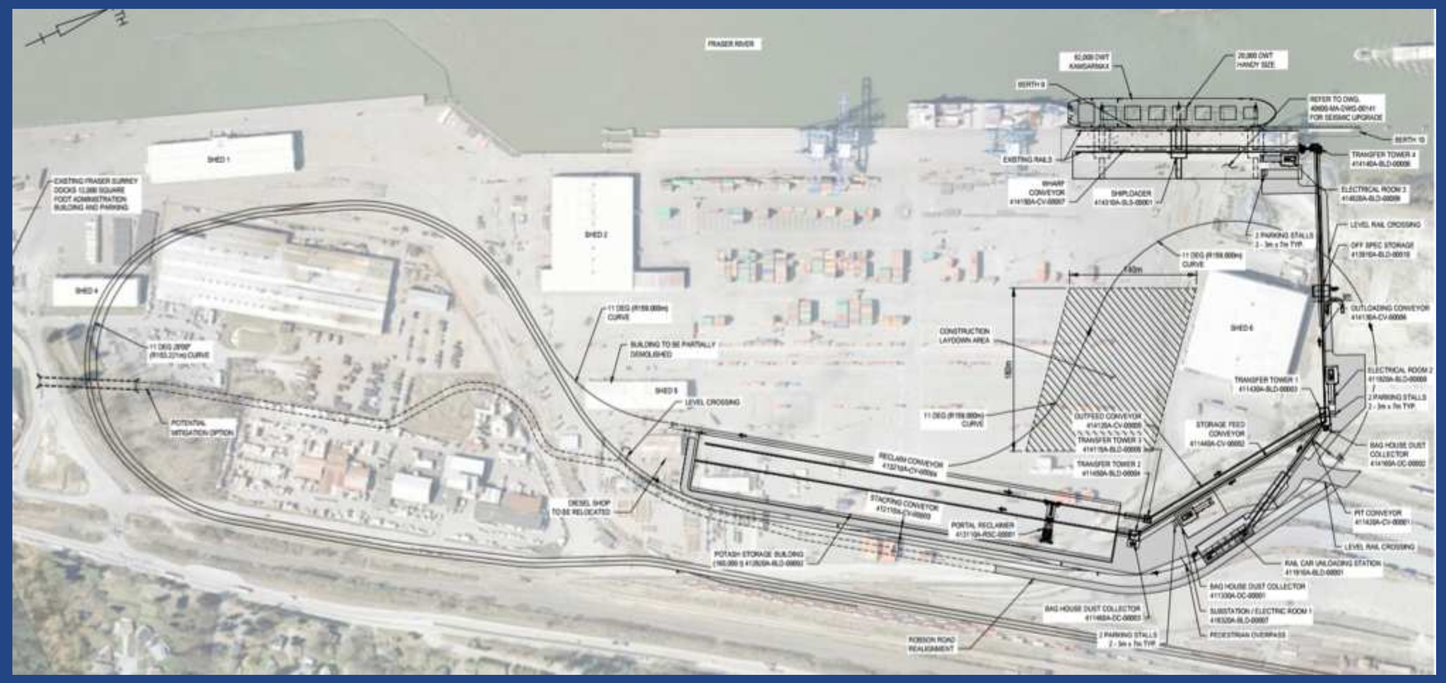
Traffic

Review of current and future site traffic, including anticipated truck and rail volumes, parking needs, potential effects on local roads, access/egress, and mitigation options.



Two overpass mitigation options were identified in the Traffic Impact Study. One mitigation option will be implemented to ensure access to Gunderson Slough and improve access along Elevator Road. BHP would construct mitigation option one, the notional internal overpass (shown as dotted line above) if the option two, the Elevator Road Interchange overpass (to be constructed by others) will not be open when BHP operations commence. Permitting for an overpass will be completed separate to this PER Application, and is not considered part of the scope of the Project.

What we studied

- Current and anticipated site traffic (road and rail) and how they will interact on site.
- On-site road traffic circulation.
- Site-generated traffic distribution throughout the day and impacts to adjacent and nearby roads and rail crossings.
- An access/egress and storage analysis for vehicles accessing site including parking requirements.
- Emergency access.
- Mitigation options.

Key Findings

- A minimal amount of road traffic will be generated by the Project.
- Without mitigation, rail traffic to the new facility will result in longer delays at Robson and Elevator Road due to blockages at rail crossings.
- Two mitigation measures are under consideration to mitigate any delays associated with the Project including a notional internal overpass and/or the Elevator Road Interchange.

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View and Shade

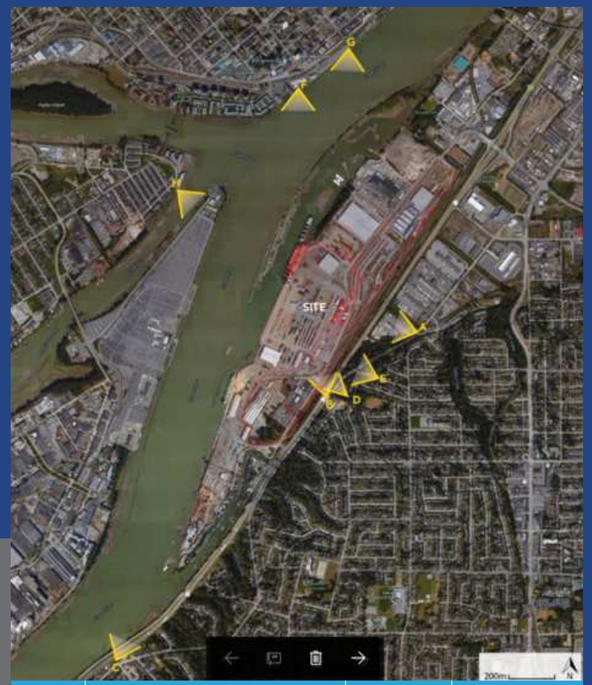
Assessment of the effects to views or shading, on the surrounding community and public areas, from the proposed Project and proposed mitigation to address these effects.

What we studied

- Assembled baseline information and guidelines.
- Selected viewpoints of the site and developed photo simulations.
- Assessed potential view effects.
- Modeled shade impacts from the proposed Project at various times of day and year.

Key Findings

- Viewscape and shading modeling indicates that the Project will have minimal effects on view and shade in the surrounding communities.
- The Project is consistent with existing land uses and is visually similar to existing infrastructure that predominates the area.



Viewpoint	Description	Direction	Elevation / Distance from Site
A	Along River Road near 11665 River Road, Surrey	Looking West	+7 metres (m) / 800 (m)
B	Along River Road near 11348 River Road, Surrey	Looking Northwest	+16 (m) / 350 m
C	Along River Road near 10637 River Road, Delta	Looking Northeast	+25 m / 1500 m
D	From Royal Heights Park Trail Head near 11389 Royal Crescent, Surrey	Looking Northwest	+33 m / 600 m
E	Along Millar Road near 11483 Millar Road, Surrey	Looking West	+38 m / 300 m from
F	At Westminster Quay near River Market	Looking South	+0 m / 1,000 m
G	At Westminster Pier Park	Looking Southwest	+3 m / 1,300 m from
H	At Port Royal Park in Queensborough near 220 Salter Street New Westminster	Looking Southeast	+0 m / 800 m from

Viewpoint B Current Northwestward View from 11348 River Road, Surrey

Viewpoint B Representation of Future Northwestward View from 11348 River Road, Surrey

Viewpoint F Current Southward View from Westminster Quay near River Market

Viewpoint F Representation of Future Southward View from Westminster Quay near River Market

Viewpoint H Current Southeastward View from Port Royal Park

Viewpoint H Representation of Future Southeastward View from Port Royal Park

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How to Participate

BHP is committed to ensuring community interests are considered as part of the Vancouver Fraser Port Authority Project and Environmental Review process. Your input is important and we invite you to ask questions and provide comments.

As part of the application review phase, we are seeking input regarding the results of our technical assessments. **The Application Review public comment period will run from 28 June to 27 July 2018.**

To learn more about the Project, read our application and technical reports, find out how to participate and provide your feedback online visit: www.bhp.com/fsdpotashexport.

Next Steps

The application review public comment period ends on 27 July, 2018 and input must be received by the closing date. Once the public comment period ends, we will prepare a Application Review Phase Consultation Summary Report and a Application Review Phase Input Consideration Report and, following approval by Vancouver Fraser Port Authority, post these to the project website and on the port authority website.

We welcome your questions by phone, mail or email.

Contact Us

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Phone: 1-844-385-8581

For questions regarding the Vancouver Fraser Port Authority's Project and Environmental Review process, please email Jessica Mehigan, Senior Planner at community.feedback@portvancouver.com or call 604.665.9570.

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